REMARKS

In response to the Final Office Action mailed April 24, 2009 and Advisory Action mailed July 1, 2009, Applicant respectfully requests reconsideration. To further the prosecution of this application, amendments have been made in the claims, and each of the rejections set forth in the Final Office Action has been carefully considered and is addressed below. The claims as presented are believed to be in condition for Allowance.

Claims 1-21 were previously pending in this application. Claims 1, 8 and 15 are amended. No claims are added or canceled. As a result, claims 1-21 remain pending for examination, with claims 1, 8 and 15 being independent. No new matter has been added.

Claim Rejections Under 35 U.S.C. §103

Each of independent claims 1, 8 and 15 stands rejected under 35 USC §103(a) as purportedly being obvious over an article entitled "TASK Forces: Distributed Software for Solving Problems of Substantial Size," Proceedings of 4th Software Engineering, September 1979, to Jones et al. ("Jones"). As presented herein, each of independent claims 1, 8 and 15 patentably distinguishes over Jones.

A.   Brief Overview Of Embodiments Of The Invention

Computer-based operations that involve complex interactions between different computers, such as those supporting various networking protocols and distributed transactions, often have to be extensively tested to ensure that they function properly (see Applicant's specification at, e.g., ¶[0002]). Typically, to test a given type of operation, a set of test computers are chosen to run a test case, which includes a sequence of tasks to be performed by different test computers in an interactive fashion (¶[0002]).

In conventional settings, execution of a test run is controlled by a centralized controller, which proceeds through the sequence of tasks one by one, so that a first test computer is

instructed to carry out one task, the controller receives the result of that processing, and then instructs another test computer to carry out the next task in the sequence based on the outcome of the previous task (¶[0002]). The use of a centralized controller to control automated execution of distributed computer tasks places a significant constraint on the availability of test computers, as each test computer is required to form a communication link with the centralized test controller to receive instructions and report task execution status end results (¶[0003]).

Some embodiments of the invention provide a framework for automated dynamic execution of distributed tasks without a centralized controller to coordinate the execution of the tasks (¶[0004]). In some embodiments, the execution of a sequence of tasks is coordinated through the cooperation of peer computers selected to perform the tasks (¶[0004]). In some embodiments, each peer computer includes an "execution agent" for handling the execution of its assigned tasks (¶[0004]). A first computer in the group of peer computers may receive execution instructions, which it then passes on to other peer computers so that each computer knows which tasks to perform and their tasks' relationships to those performed by other computers (¶[0004]). The execution agents of the peer computers communicate during execution to synchronize the execution of the tasks and determine execution status (¶[0004]).

The foregoing summary is provided to assist the Examiner in appreciating various aspects of the present invention. However, this summary does not necessarily apply to each independent claim, and the language of each independent claim may differ in material respects from the summary above. Thus, Applicant respectfully requests that careful consideration be given to the language of each independent claim, and they each be addressed on its own merits, without relying on the summary above. In this respect, Applicant does not rely on the foregoing summary to distinguish any of the claims over the prior art, but rather relies only upon the language of the claims and the arguments presented below.

B.   Independent Claims 1 and 8

        Each of amended independent claims 1 and 8 includes limitations directed to a first computer in a group of peer computers receiving, from at least one server, execution instructions including a sequence of tasks to be performed and an automatically determined assignment of tasks to peer computers. The first computer in the group of peer computers forwards execution instruction information, derived from the execution instructions, to the other peer computers in the group. The execution instruction information that is forwarded to each respective peer computer in the group informs the respective peer computer of a relationship between one or more tasks assigned to the respective peer computer and one or more tasks assigned to other peer computers in the group of peer computers.

        Jones fails to satisfy all of the limitations recited by either of claims 1 or 8. For example, Jones does not disclose or suggest a first computer of a group of peer computers receiving, from at least one server, execution instructions including a sequence of tasks to be performed and an automatically determined assignment of tasks to peer computers, as recited by each of claims 1 and 8. Rather, Jones discloses a system wherein a centralized "coordinator" forwards instructions to a group of server computers and manages the processing performed by the server computers (p. 326). The centralized coordinator disclosed by Jones is precisely what Applicant's specification describes as being conventional (see, e.g., ¶[0002]). In this respect, Jones discloses that the coordinator oversees processing performed by various servers, coordinates server actions, handles I/O associated with image processing tasks, creates server modules, server processes, instantiates communication mailboxes, and accesses "image slices" (p. 326).

        In contrast to the arrangement disclosed by Jones, each of claims 1 and 8 includes limitations directed to a first computer of a group of peer computers receiving execution instructions from at least one server, and forwarding execution instruction information derived from the execution instructions to other peer computers in the group. In the system disclosed by Jones, there is no first computer in a group of peer computers which receives execution instructions from at least one server and forwards execution instruction information derived from

the execution instructions to other peer computers in the group. In the system of Jones, the coordinator does not receive execution instructions from any entity, let alone at least one server, and does not forward execution instruction information to other peer computers in a group, as each of claims 1 and 8 requires. Specifically, Jones says nothing about the coordinator having any peer computers to which it forwards information, or indeed about the coordinator being a peer computer which belongs to a group of peer computers. Rather, Jones discloses only that the coordinator oversees and coordinates the processing of various server computers (p.326).

Moreover, Jones also does not disclose or suggest a first computer forwarding execution instruction information, derived from execution instructions, which informs each respective peer computer to which it is forwarded of a relationship between one or more tasks assigned to the respective peer computer and one or more tasks assigned to other peer computers in the group, as recited by each of claims 1 and 8. Not only does Jones say nothing at all about information which informs each peer computer in a group of a relationship between one or more tasks assigned to the peer computer and one or more tasks assigned to other peer computers, but in fact Jones discloses that only the coordinator is informed of relationships between tasks assigned to various servers (see, e.g., p. 321, first column, third full paragraph, and p. 326, section entitled "T.C. Coordinator"). Jones therefore fails to satisfy this limitation recited by each of claims 1 and 8 as well.

In view of the foregoing, each of claims 1 and 8 patentably distinguishes over Jones, such that the rejection of these claims, and of the claims that depend respectively therefrom, under 35 U.S.C. §103(a) as purportedly being obvious over Jones should be withdrawn.

C.   Independent Claim 15

Independent claim 15 recites a computer system comprising a plurality of peer computers each having an execution agent programmed for receiving a set of execution instructions for the peer computers including a sequence of tasks to be performed and an automatically, without user action, determined assignment of tasks to the peer computers. The execution agent on each peer

computer is programmed for forwarding, to execution agents on other peer computers, execution instruction information derived from the execution instructions. The forwarded execution instruction information informs a respective peer computer of a relationship between one or more tasks assigned to the respective peer computer and one or more tasks assigned to another of the plurality of peer computers.

It should be appreciated from the discussion above relating to claims 1 and 8 that Jones fails to disclose or suggest an execution agent on a peer computer programmed for forwarding execution instruction information that informs a respective peer computer of a relationship between one or more tasks assigned to the respective peer computer and one or more tasks assigned to another of the plurality of peer computers.

Accordingly, claim 15 patentably distinguishes over Jones, such that the rejection of claim 15 under 35 U.S.C. §103(a) as purportedly being obvious over Jones should be withdrawn.

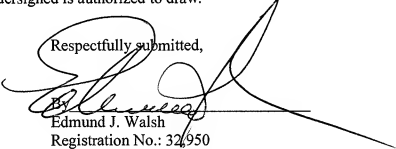Claims 16-21 depend from claim 15 and are allowable for at least the same reasons.

CONCLUSION

A Notice of Allowance is respectfully requested. The Examiner is requested to call the undersigned at the telephone number listed below if this communication does not place the case in condition for allowance.

If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicant hereby requests any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, the Director is hereby authorized to charge any deficiency or credit any overpayment in the fees filed, asserted to be filed or which should have been filed herewith to our Deposit Account No. 23/2825, under Docket No. M1103.70583US00 from which the undersigned is authorized to draw.

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Respectfully submitted,

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